REMARKS/ARGUMENTS

Claims 1-25 were pending when last examined and are rejected. Claims 1, 2, 11 and 21 have been amended and new claims 26-28 have been added. Therefore, upon entry of this amendment, which is respectfully requested, claims 1-25 and 26-28 will be pending. No new matter has been added.

Continued Examination Under - 37 CFR § 1.114

Applicant appreciates that in item 1, page 2 of the present Action, the Examiner confirms withdrawal of the finality of the previous Action and entry of Applicant's submission (RCE).

Declaration Under - 37 CFR § 1.131

Applicant also appreciates that in item 5, page 6 of the present Action, the Examiner confirms the sufficiency of Applicant's declaration to overcome the Galindo-Legaria reference.

Claim Rejections - 35 USC § 103
Wardrop i.v.o. Guthrie

In item 4, page 3 of the present Action, the Examiner rejected claims 1-25 under 35 U.S.C. 103(a) as being unpatentable over Pub. No. US2003/0088579 to Brown et al. (hereinafter, "Brown"), and further in view of U.S. Patent No. 6,587,854 B1 issued to Guthrie et al. (hereinafter, "Guthrie"). Applicant respectfully traverses.

Independent claim 1 as amended recites:

> "1.(Presently Amended) A method of optimizing a query in a multi-tenant database, said multi-tenant database having one or more data tables, each table having one or more logical columns defining data categories and one or more logical rows associated with one or more tenants, wherein a plurality of tenants have data stored in the data tables, the method comprising:

generating tenant-level statistics for one or more of said plurality of tenants for one or more of the data tables;

receiving a SQL query; and

optimizing the SQL query based on the tenant-level statistics." (Emphasis added).

Applicant respectfully submits that the Examiner's rejection of Claim 1 is improper as it not only misleadingly stretches, erroneously reconstructs and misrepresents, but further contradicts and irreparably impairs the teachings, intended purposes and principles of operation of the cited references, among other improprieties.

The Examiner *admits* that Brown fails to teach and at least explicitly suggest at least "tenant-level statistics," let alone the recited "generating *tenant-level statistics*..." and the recited "optimizing the SQL query based on the *tenant-level statistics*." The Examiner *further admits* that Guthrie also fails to teach or suggest these recited limitations – at least implicitly by the Examiner's omission of relevant argument. (Specifically, the Examiner concludes that "the *difference between Brown['s] teaching and the invention*... is that Brown uses statistic of a *subset of rows* in the database table instead of '*tenant-level statistic*' as claimed." Emphasis added.) The Examiner thus further implicitly admits that Brown also fails to render obvious the claim 1 preamble, thereby contradicting the Examiner's initial contention, and does not assert that Guthrie teaches this deficiency. Therefore, because this contention is never properly asserted in the remaining argument, Applicant submits that the rejection is improper and requests withdrawal of the rejection for at least this reason.

The Examiner next further admits that Brown also fails to teach or suggest the entire technological area of the recited "multi-tenant database," let alone a "method of *optimizing a query* in a multi-tenant database, said multi-tenant database having..." and a "*plurality of* tenants hav[ing] data stored in the data tables." Moreover, the Examiner at least implicitly admits by at least omission that both Brown and Guthrie fail to teach and fail to at least explicitly suggest generating tenant-level statistics for one or more of a "plurality of tenants" or optimizing an SQL query based on the tenant-level statistics for one or more of a "plurality of tenants."

So what is the Examiner's purported basis for rejection? Applicant will attempt to identify support for –or at least an understanding of– the Examiner's assertions. It will become apparent, however, that Applicant ultimately disagrees with the Examiner.

According to the Examiner (hereinafter, "assertion 1"), Brown teaches "generating statistic[s] for a subset of rows in data table" at para. 43, "receiving a SQL query" at para. 33-34 and "optimizing the SQL query based on the statistic[s]" at para. 33-34 (emphasis added). However, even ignoring arguendo that the Examiner's misstatement of para. 43 may thwart Brown's principal and intended purpose, and that paras. 33-34 fail to even mention "the statistic[s]," clearly the Examiner has NOT yet proffered an assertion that Brown teaches or suggests at least the above limitations and no *prima facie* obviousness over at least the above claim 1 limitations is yet made.

The Examiner then merely states (hereinafter, "assertion 2") –*without Notice or specific citation*- that "multi-tenant database is well known in the art" (emphasis added), concluding –again *without Notice or specific citation*– that "each of Guthrie's 'enterprise portioned data' is similar to Brown's sample of rows," and therefore that "it would have been obvious…" to combine Brown and Guthrie "to optimize query based on enterprise… i.e. tenant level statistic… in a multi-tenant database…" in order to provide more accurate method and reduce the processing time" (emphasis added). Applicant respectfully disagrees.

Applicant submits that the Examiner **clearly cannot** properly relate Brown's *sample of a base table* with Guthrie's "enterprise partitioned table" of a "multi-tenant database," even assuming arguendo that the Examiner's unsupported characterization of Guthrie may be accurate.

First, it is readily evident that neither Guthrie nor **any** one of ordinary skill would have –at the time of the invention- related generic SQL database operation as in Brown to specific implementations of specific operations in conjunction with a multi-tenant database. Evidence includes, for example, the absence of a proper prior art reference in this case, as well as the success of companies such as salesforce.com in applying extensive research toward modifying –even contorting- SQL database systems to instead or additionally provide multi-tenant database system operation that was not at all anticipated by SQL DBMS providers. (See,

for example, the instant specification, Guthrie and even new vendor/review publications). Evidence also includes that Brown does not teach, suggest or even mention a multi-tenant database and –more than coincidentally- did not need to modify the underlying SQL DBMS, while Guthrie does teach a form of multi-tenant database (at least, according to the Examiner) and does need to "modif[y] a database command" that is "issued against a database object by a user" by "adding predicates" to the database command (Guthrie Abstract). Moreover, Brown is **not** directed at providing a "more accurate method" as the Examiner asserts, but rather Brown para. 43 and elsewhere teaches that "a faster mechanism is provided." "[R]ather than… a full table scan… statistics are collected based on reading a sample… of rows… from the… table" (emphasis added). Accordingly, the **only** proper teachings, the **only** incentive and the **only** consideration of implementation concerns for at least the above limitations of the claim 1 embodiment cannot come from the cited references and must necessarily be taken *directly and completely* from embodiments of the present invention. Therefore, Applicant submits that the only basis for the rejection must **necessarily** be impermissible hindsight.

Second, the Examiner contradicts the first assertion by the Examiner's statement of the second assertion (as identified below). While such contradicting assertion is **still** not entirely accurate, the contradiction and its correction is crucial to Brown's purpose and principle of operation, such that combining Brown with Guthrie as the Examiner suggests would impermissibly render at least Brown unsatisfactory for its intended purpose and would impermissibly require changing Brown's principle of operation.

Brown does **not** teach "generating statistics for a *subset of rows*," as the Examiner assertion 1 contends. Rather, BROWN paras. 43-44 instead teach that "rather than… a full table scan… "statistics are collected based on reading a sample… of a [base] table" of a database. Thus, according to Brown, it is the sample and not merely statistic collecting that *includes* "less than all the rows." Also, according to Brown, the sample is specifically "of a table," and further, a base table (emphasis added). (See also Examiner assertion 2.)

Thus, absent impermissible hindsight, it is unclear to Applicant how the Examiner might even mistakenly consider, let alone assert **any** relatedness of Brown's sample of a base table to the apparently discontiguously disbursed "each of Guthrie's 'enterprise portioned data'."

WEBSTER'S Encyclopedic Dictionary of the English Language (1971), for example, defines "sample" as a "small part or quantity of anything intended to be shown as evidence of the *quality of the* whole" (emphasis added). Black's Law Dictionary (1990) is in agreement with Webster's ("a small quantity ... presented... as evidence of the quality of the whole"). Accordingly, Brown's sample... of a base table would necessarily serve as providing evidence of the *quality of a* whole base table and **not** –as the Examiner unsupportedly asserts- Guthrie's enterprise partitioned data (as a specifically targeted table segment), let alone "each of" such data or any other particular segment of a base or other tables as may *happen* to suit the Examiner's immediate purposes in examining a particular application.

It is not, however, even necessary to look beyond Brown itself to show that the the rejection is improper. Specifically, while Brown does **not** teach, suggest, mention or consider anything even relating to "enterprise partitioned data," tenants or a multi-tenant database and Guthrie does **not** anywhere teach, suggest mention or consider anything even relating to a "sample" of any kind, Brown's intention as to its "sample" is clearly stated. According to Brown, the samples of Brown are "random" samples (e.g., see paras. 28, 31, 87), and can **not** correspond with Guthrie's enterprise partitioned data, which can **not** be random, and even if it could random, could not be construed to somehow correspond reliably with Brown's samples.

It is also not necessary to look beyond even the cited and close paragraphs in Brown to show that the rejection is improper. In cited para. 43, for example, Brown teaches that "the sample is set by specifying a percentage... indicating the percentage of rows to read from the base table in collecting the statistics" (emphasis added). Additionally, Brown para. 50 further provides examples of its percentage based 'random' samples as "the *first M rows*... of the table" and "every *Nth row*" of the table (emphasis added). Contrastingly, Guthrie does **not** teach or suggest a corresponding configuration; nor would imposing a correspondence of such sample or further 'random' sample corresponding to Brown's percentage make any sense in Guthrie. (It would not, for example, make sense to require a substantial Guthrie change whereby tenant data for a tenant **must** correspond with the first M rows, every Nth row or other "random" segment of a base table as may correspond with a given implementation instance - merely to

satisfy the Examiner's view of Brown and to add *some* credence to the Examiner's assertion. Moreover, requiring such change is impermissible.) Accordingly, Brown's sample does **not** correspond with or otherwise relate to Guthrie's enterprise partitioned data, as the Examiner contends.

Applicant further respectfully points out that, even assuming arguendo that Brown and Guthrie may somehow be construed in a combined manner, the 'fact' that they may be combined would not be sufficient to establish *prima facie* obviousness under MPEP 2143.01. Applicant therefore submits that Brown and Guthrie can **not** be combined as the Examiner asserts.

Firstly, the intended purpose of Brown is clearly established, for example, in the cited para. as providing "a faster mechanism... for collecting statistics of columns of a table in a database system," whereby "[r]ather than collect statistics based on a full table scan, statistics are collected based on reading a sample ... of a table. Contrastingly, enterprise partitioned data would store data differently. Therefore, assuming arguendo the Examiner's characterization of Guthrie is correct, combining Brown with Guthrie would cause Brown to collect statistics on a sampling (and further, a random sampling) of data over a base table that is **not** a subset of Brown's enterprise partitioned data and that would **not** provide a faster mechanism for collecting statistics, thereby rendering Brown unsatisfactory for its intended purpose. Accordingly, the rejection is impermissible under MPEP 2143.01 as well as under *In Re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Secondly, the principle of operation of Brown per cited para. 43 is: collecting statistics based on reading a sample of a table. Brown's sample (e.g., percentage including first M rows or every Nth row) of the table must therefore be representative of data of "the table." Such collecting of representative table samples for faster collection according to Brown is simply **not** assurable according to Guthrie which, for example, at col. 5, lines 1-6, teaches a different, discontiguous distribution of data ("Enterprise data 241 contains rows that may be accessed by only enterprise user 221" and "enterprise data 242, 243, and 244 may only be accessed by enterprise users 222, 223, and 224, respectively.) See also the instant Background of the Invention, which more properly places statistics collecting as in Brown as providing statistics of

a table and which statistics are therefore lacking in conjunction with a multi-tenant database (which Brown more than coincidentally does not consider at all). Clearly then, providing for a correspondence of Brown's sample and Guthrie proffered enterprise partitioned data would require **substantially** changing the principle of operation of Brown (or Guthrie or both), which is impermissible under MPEP 2143 as well as under *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Moreover, it is unclear, according to the teachings of Brown and Guthrie and without impermissible hindsight, exactly or even generally **how** the Examiner's asserted combination would be achieved and whether, according to such teachings and without impermissible hindsight, **any** expectation of success, let alone a reasonable expectation of success might be achieved. The Examiner may note that resolution of problems and further changes to the cited art –in addition to the above sampling- may, for example, include table/intra-table locating, timing and/or schema coordination, accommodating customization, and so on, that are further **not** asserted by the Examiner and simply **not** taught be either cited reference or their combination. Accordingly, Applicant submits that the rejection is improper for this reason as well.

Therefore, Applicant respectfully submits that claim 1 is patentable over the combination of Brown and Guthrie and requests withdrawal of the rejection and early allowance of claim 1 for at least the foregoing reasons.

Regarding the remaining pending claims, claims 2-10, which stand rejected over the combination of Brown and Guthrie, depend from claim 1 and are patentable over the combination of Brown and Guthrie for at least the same reasons that claim 1 is patentable over the combination of Brown and Guthrie. Further, according to the Examiner (on page 6 of the present Action), "claims 11-25 recite a system and method comprising similar limitations as in claims 1-10..." and are "rejected by the same reasons." Therefore, assuming arguendo that this is the case, Applicant submits that claims 11-25 are patentable over the combination of Brown and Guthrie for at least the same reasons that claims 1-10 are patentable over the combination of Brown and Guthrie. Applicant further submits that newly added claims 26-28 are dependent claims depending from claims 1, 2 and 11 respectively and are patentable over the combination

of Brown and Guthrie for at least the same reasons that claims 1, 2 and 11 are patentable over the combination of Brown and Guthrie.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 925-472-5000.

Respectfully submitted,

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